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A

MUSCLE-N
m MGGQITRNTIHD-----SIGGSFPVPS-----HRCHBKQKHCPTLSG-----

BRAIN-N
m HGNFSSVSSSLQGNPSRASRG---PQNLKE-----SIGGSFPVPS-----HRCHBKQKHCPTLSG----- 55
r HGNFSSVSSSLQGNPSRASRG---PQNLKD-----SIGGSFPVPS-----HRCHBKQKHCPTLSG----- 55
h HGNFSSVSSSLQGNPSRASRG---PQNLKD-----SIGGSFPVPS-----HRCHBKQKHCPTLSG----- 55
d HGLSDIPANYMQGSHPLTLHPQQQHQHQQHLQHLQMQQLNNAMETPAQQAQVLAHESNELLMSTDKLSSKKKKLLKKIKKFPGL 90

NLS
m -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
r -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
h -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
d VRRSPSSCPGPNNLPLQPH-SVHGDNIRISRDGTLARSPFSFCRAITFSARPRIRERICVPAEISNNNGGIRFGFTSKDPSRIHPD 178

NLS1
m -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
r -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
h -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
d VRRSPSSCPGPNNLPLQPH-SVHGDNIRISRDGTLARSPFSFCRAITFSARPRIRERICVPAEISNNNGGIRFGFTSKDPSRIHPD 178

NLS2
m -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
r -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
h -----GGLPATPLLFHPHTKSGCLMDLSHKAVKRQASFCNAITFSNRPLIYEQVRLITKQCCWSGALRLGFTSKDPSRIHPD 136
d VRRSPSSCPGPNNLPLQPH-SVHGDNIRISRDGTLARSPFSFCRAITFSARPRIRERICVPAEISNNNGGIRFGFTSKDPSRIHPD 178

NHR1
m SLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218
r SLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218
h SLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218
d TLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218

LRS1
m SLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218
r SLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218
h SLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218
d TLPKYACPDLSVOSGFNAKALFEFANEENIAFWYDKKGRFYRINESAAMLFPSGVRIVDPHALVYVGLTRGVQLDSDS----- 218

O
m ELVLPDCLRPSPFTALRRPSLRCEADE-----ARLSVSCDLNVSGADGDDGAPPAG--CPIPONSLSNQSRSRALB-A 288
r ELVLPDCLRPSPFTALRRPSLRCEADE-----ARLSVSCDLNVSGADGDDGAPPAG--CPIPONSLSNQSRSRALB-A 288
h ELVLPDCLRPSPFTALRRPSLRCEADE-----ARLSVSCDLNVSGADGDDGAPPAG--CPIPONSLSNQSRSRALB-A 288
d PAALMATVPAQQQMPQPAANASSALNSHHPHQSSRRSLPGHTAIEHDLERHVMESLQSLHLGNGCGSVASVEAAIAHDLANGPL 358

PKB
m ELVLPDCLRPSPFTALRRPSLRCEADE-----ARLSVSCDLNVSGADGDDGAPPAG--CPIPONSLSNQSRSRALB-A 288
r ELVLPDCLRPSPFTALRRPSLRCEADE-----ARLSVSCDLNVSGADGDDGAPPAG--CPIPONSLSNQSRSRALB-A 288
h ELVLPDCLRPSPFTALRRPSLRCEADE-----ARLSVSCDLNVSGADGDDGAPPAG--CPIPONSLSNQSRSRALB-A 288
d PAALMATVPAQQQMPQPAANASSALNSHHPHQSSRRSLPGHTAIEHDLERHVMESLQSLHLGNGCGSVASVEAAIAHDLANGPL 358

NHR2
m QLDG-----DLRFHALRAGAHVRILDEQTVARLEHGRDERALVFTSRVSVASTIFIMVTRSGGGRAGALSFGVTTCDPQGTTFADLEFS 373
r QLDG-----DLRFHALRAGAHVRILDEQTVARLEHGRDERALVFTSRVSVASTIFIMVTRSGGGRAGALSFGVTTCDPQGTTFADLEFS 373
h QLDG-----DLRFHALRAGAHVRILDEQTVARLEHGRDERALVFTSRVSVASTIFIMVTRSGGGRAGALSFGVTTCDPQGTTFADLEFS 373
d RYNANGRLIPVFFENT-KGRNVRLSQDRFVASRTESDFCQGYVFFARPIRIGELIVQYLKTEQMYVGAALGLSCNEAMCENDLEND 447

LRS2
m PEALVDRKEFPAVCR-VPGPLHSGLILGLVNNADGELHLSHNGAAGMQLCVDASQILMMLFSLHGAIQVRIIGSTIMTERGGF----- 457
r PEALVDRKEFPAVCR-VPGPLHSGLILGLVNNADGELHLSHNGAAGMQLCVDASQILMMLFSLHGAIQVRIIGSTIMTERGGF----- 457
h PEALVDRKEFPAVCR-VPGPLHSGLILGLVNNADGELHLSHNGAAGMQLCVDASQILMMLFSLHGAIQVRIIGSTIMTERGGF----- 457
d SDFLDRPEYVYVSKDIAAAPQGGDEIAFVAPNGCVSISKNGPVVVMHVDQSLCLWAFLDVYGSTQSLMFRQQPLNMVAYPSQPQV 537

SP1
m -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
r -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
h -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
d NVNASSSSACNAASSRMLPMTESHSSLNAGATAKLLHHSQLSVAQSTSTLASAGGVNGSRMISMESNGDILQIQPNNGGTVLVVNLP 627

O
m -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
r -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
h -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
d NVNASSSSACNAASSRMLPMTESHSSLNAGATAKLLHHSQLSVAQSTSTLASAGGVNGSRMISMESNGDILQIQPNNGGTVLVVNLP 627

SP2
m -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
r -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
h -----SLPCSPASTPSPSALGIRLSD-----PLSTCCSGPLGGSAGG-----TAPNSPVSPESVTPGLQWSD----- 519
d NVNASSSSACNAASSRMLPMTESHSSLNAGATAKLLHHSQLSVAQSTSTLASAGGVNGSRMISMESNGDILQIQPNNGGTVLVVNLP 627

RZD
m HMCICYSGLRLKKALH-ACCPICRRPKDIHKYRSS 574
r HMCICYSGLRLKKALH-ACCPICRRPKDIHKYRSS 574
h HMCICYSGLRLKKALH-ACCPICRRPKDIHKYRSS 574
d HMCICYSGLRLKKALH-ACCPICRRPKDIHKYRSS 574

B

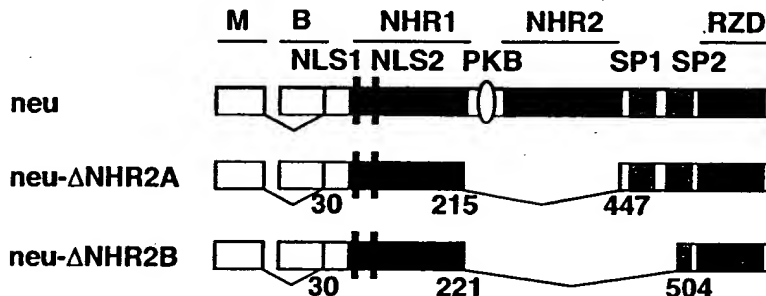
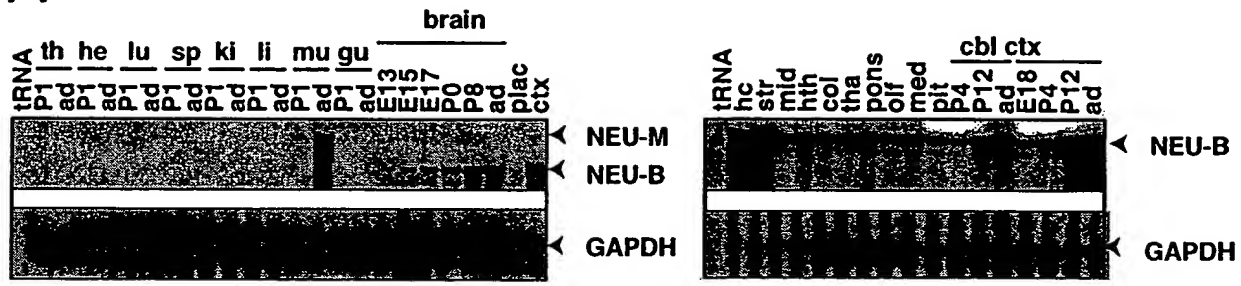


FIGURE 1

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A



B

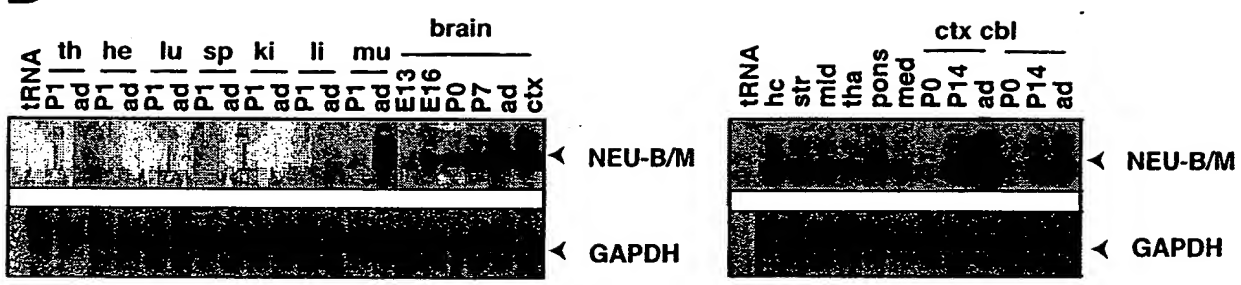


FIGURE 2

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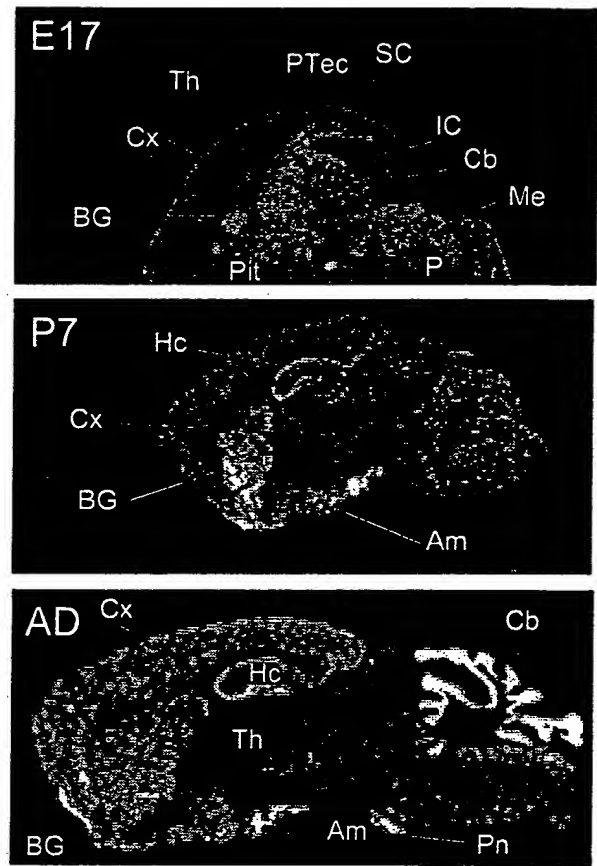


FIGURE 3

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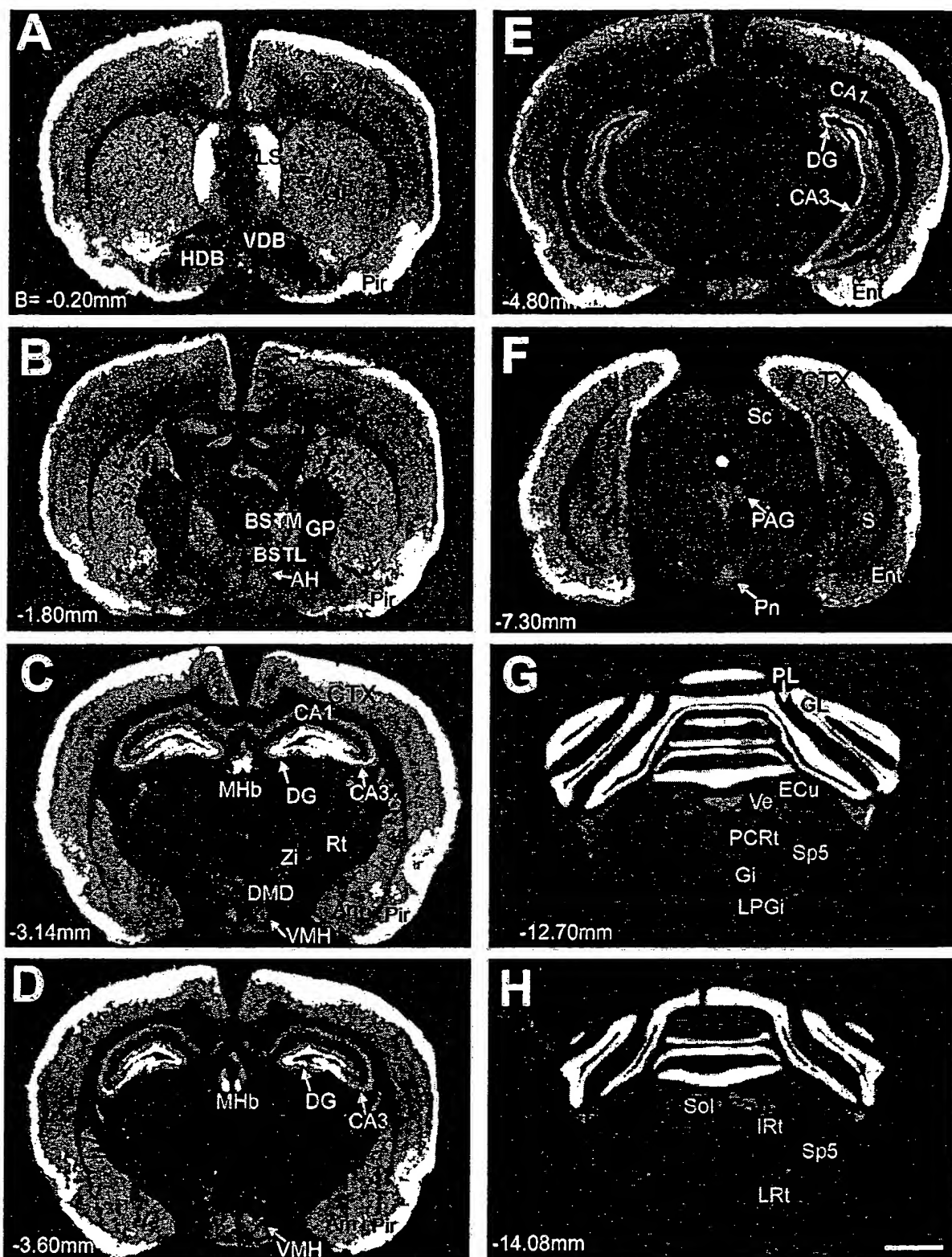


FIGURE 4



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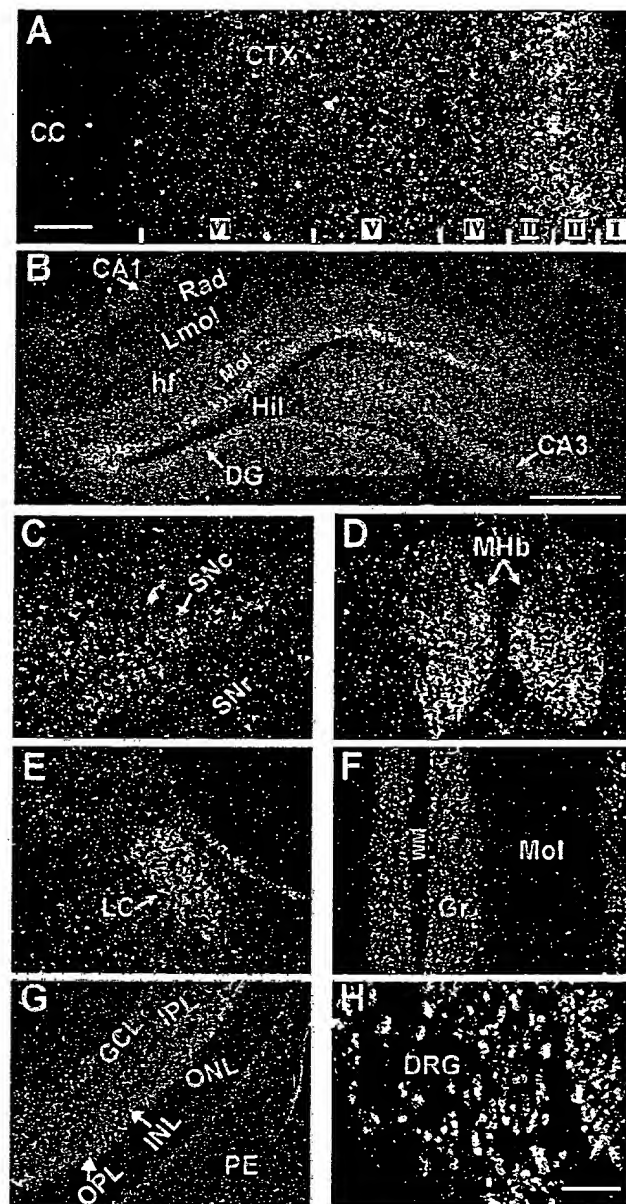


FIGURE 5

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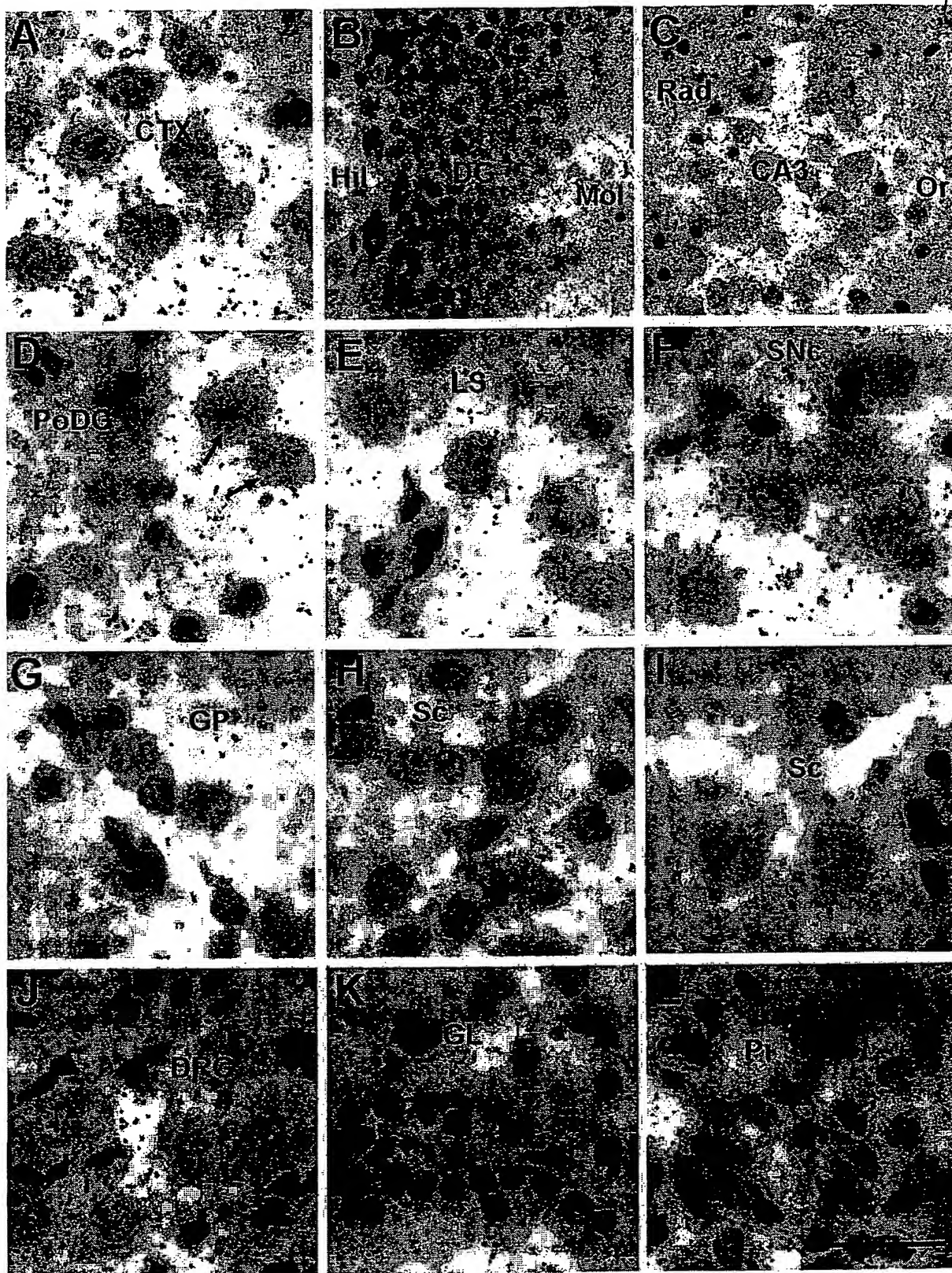
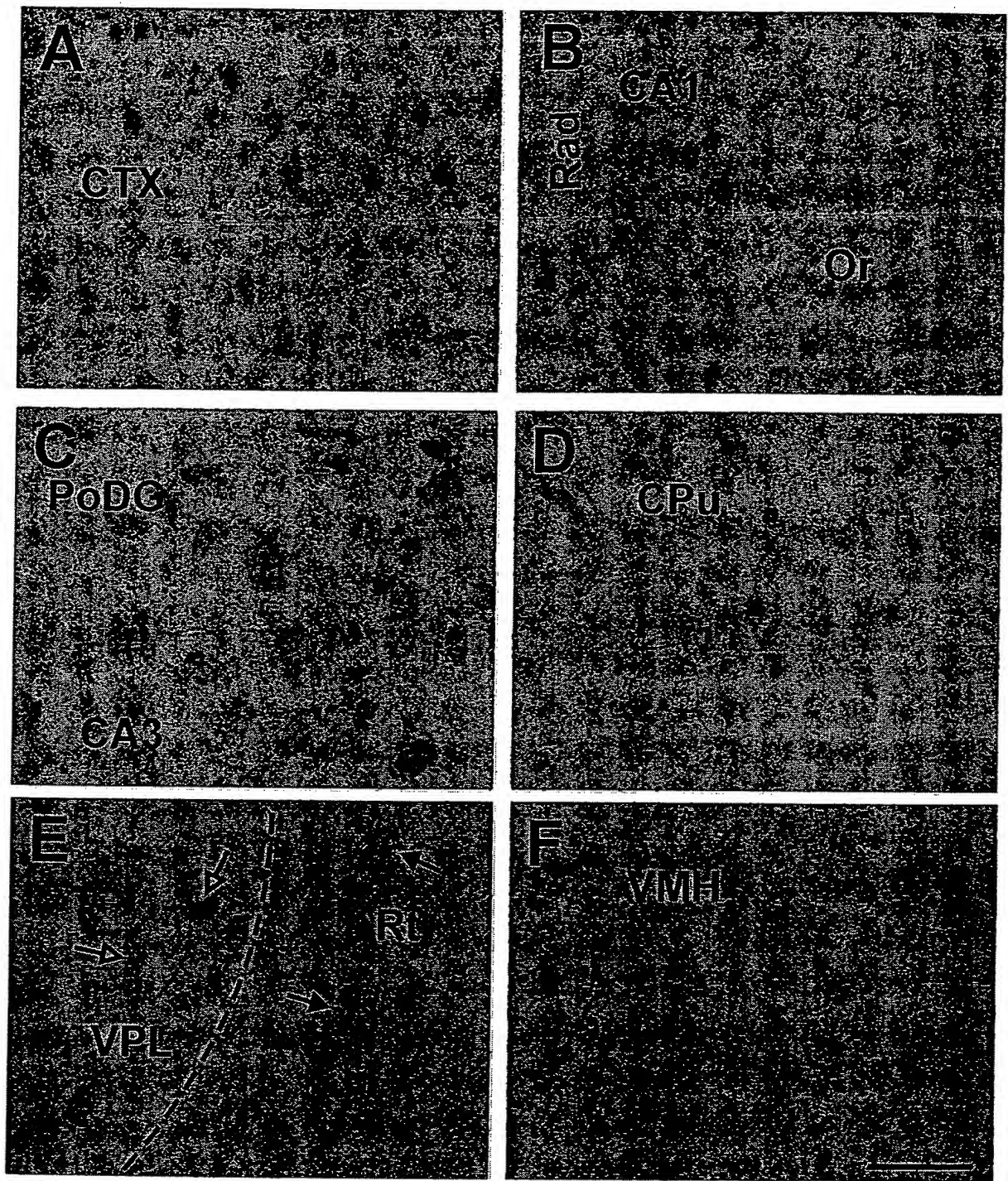


FIGURE 6

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FIGURE 7



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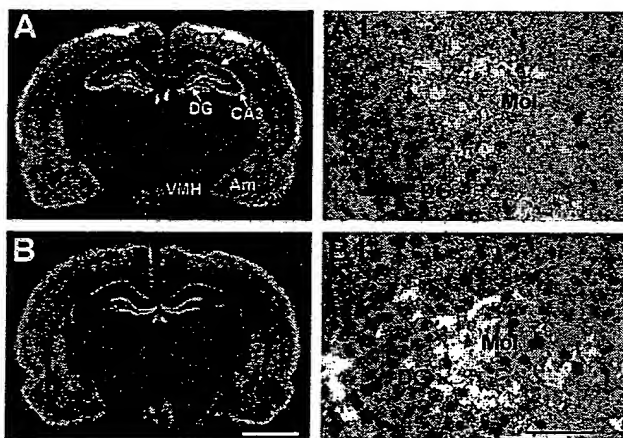


FIGURE 8

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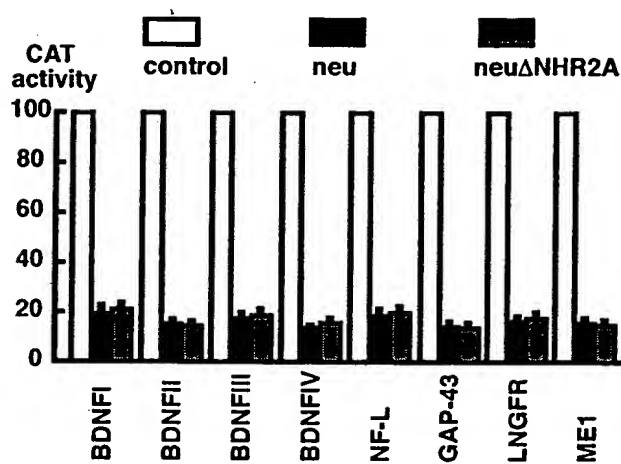


FIGURE 9



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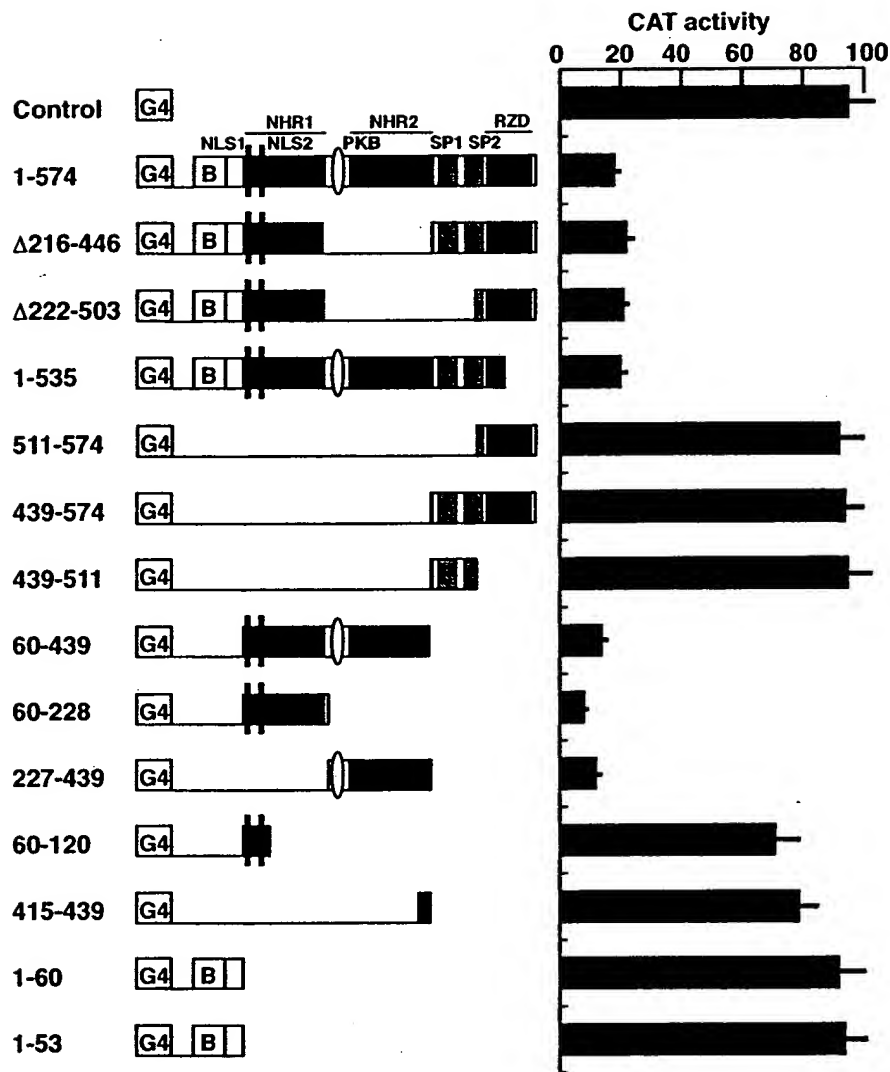


FIGURE 10

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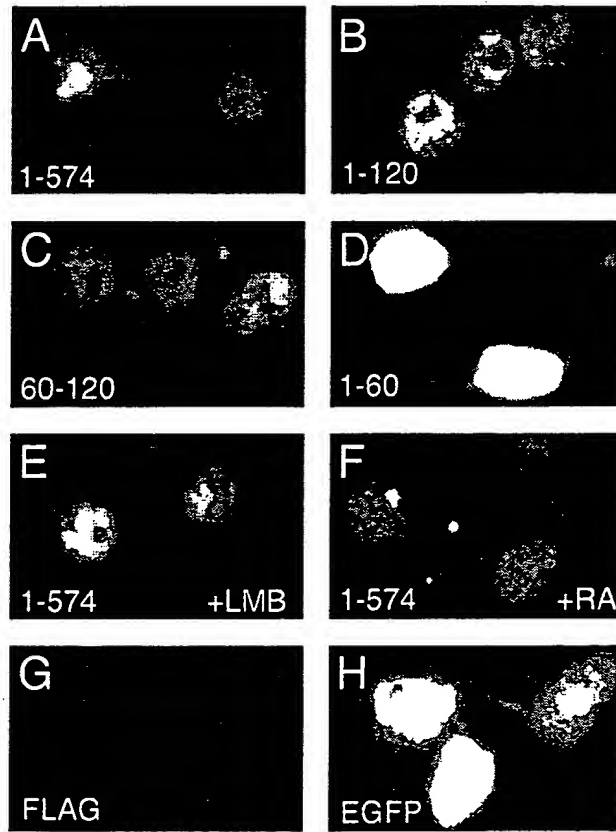


FIGURE 11



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h1I FHPHTKGSRLDLSHKAKR-QASFCNAIFSNRPVLIYEQRRTKKQCCWSGAR
h2I FHAQAKGKTRDGHSSRRTR-RNSFCNGVFPORPRLYEQRVAVRPGWSGAR
h3 FHAQAKGKTRDTRGCIARR-RTTFHDGIFSORPRLGERIAVRLREESGWCGAR
dI FHS-VHGDNERSRDGTIARR-FESFCRAIFSAFPRINERCAEISNNWNGAR
dII FHNTK-GRTRRSQDRFVASRTESDFCQGYFAPPRIGEKIIVLKTEQMYVGRAR
h2II FHATR-GPRTRSSADRKVACAPRPDGGRTLFSPRPRPGESFVGRPGLAAPGAR
h1II FHALRAGARTRLDQETVARVEHGRDERALFSPRPRVAETEFVTRSGGARFGAR

h1I GHTSKIEPSRTHPDSLPHYACPDIVSISGFWAKAL-PEEFANEENIAFWVDKKGRTHRI
h2I GETAHPSLSAQDIPKYACPDIVTPGYWAKAL-PENLALRDTWAYWADRHRGFYSV
h3 GHTRLSPACSVPSLPPFLCPDIEESPTTAAVAVL-PEGCALTSDFRFVWDRRGCFKV
dI GHTSNPPTVEG-TLPKYACPDITNRPGEWAKAL-HEQYCEKDNIRYYVNGAGDITYGI
dII GHTSCNPAMLOP-NDLPNDSDFLLDRPEYVVVSKDIAAAPQRGDEAFFVAPNGEVSISK
h2II GHTSCNPGVTRP-NELPADPDALLDRKEYVVVAR-AGPVPSGGDALSTTLRPGDVLGI
h1II GHTTCNPGTTRP-ADLPFSPEALVDRKEFWVCR-VPGPLHSQDIEGLVVNADGELHSH

h1I NDSAVMLFFSGVRTADPLWAVVDVYG-LTRGVOLL
h2I NDGEVPLFHCGVAVGGPLWAVVDVYG-ITDEVOLL
h3 NAGCRLLLREGVAVGAPLWAVVDVYG-TTKAVELL
dI NNEEKGVILTGHDTLSLLWTVVDVYG-NCTGREL
dII NNGPAVVVMH-VDSLOLWAVVDVYG-STQSLRME
h2II NGRPRGRLLC-VDTTQALWAVVAVRGGVAGQIR
h1II NGAAAGMQLC-VDSQPLWAVVGGVHC-TITQIR

FIGURE 12

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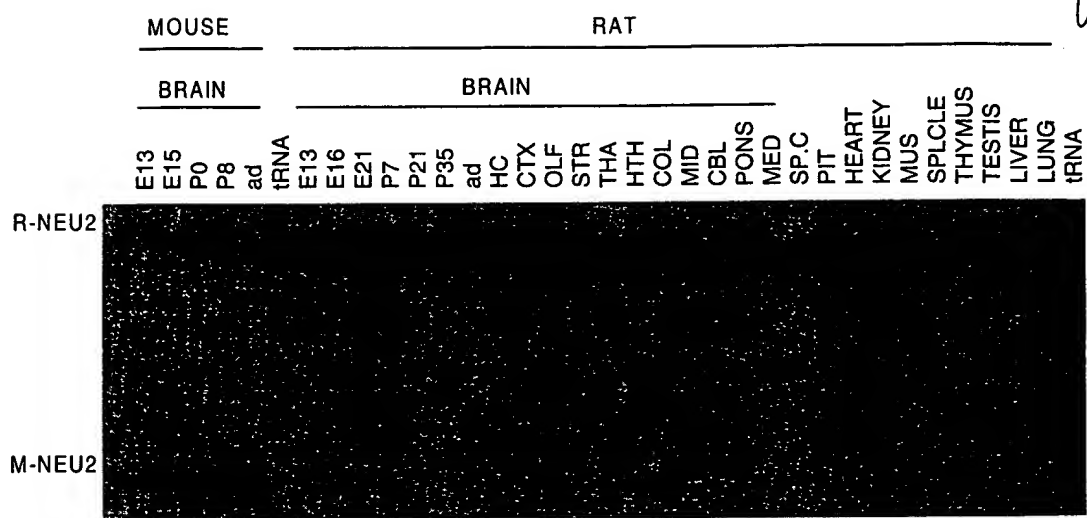


FIGURE 13

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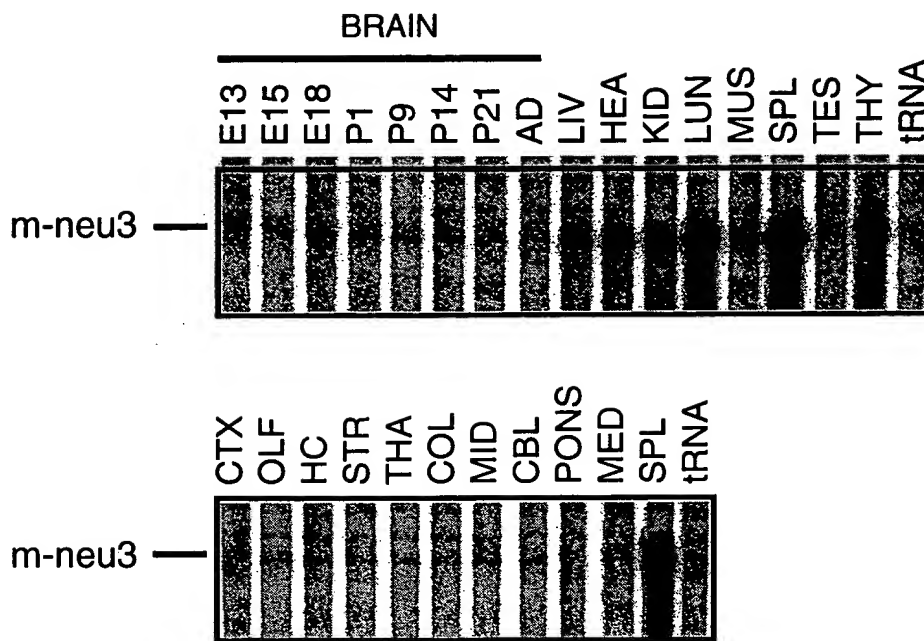


FIGURE 14



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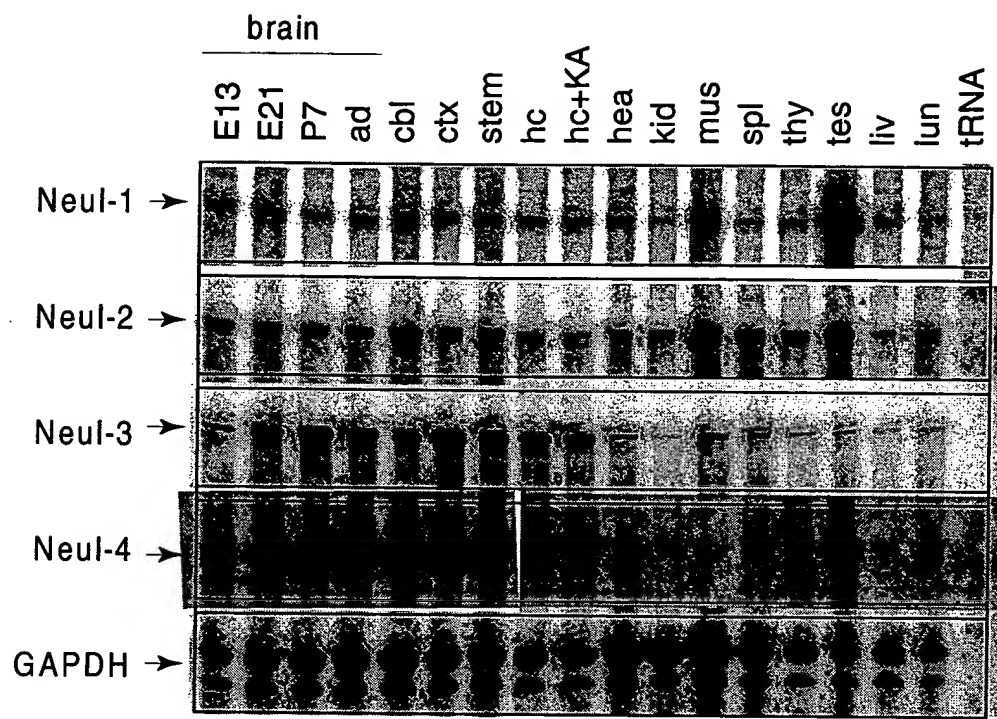


FIGURE 15

